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above, further in view of Fromson et al (4,183,788) and Gerhardt (5,281,511). The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Fromson et al (4,183,788), Gerhardt (5,281,511) and Fantoni et al (4,964,338) discloses the conventional fabrication of a printing surface by the application of a photosensitive coat. Fromson et al (4,183,788) further teaches the conventional fabrication of a roughened and anodized surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903) depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Fromson et al (4,183,788), Gerhardt (5,281,511) and Fantoni et al (4,964,338). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

• Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of the secondary references, as applied to claim 1 above, further in view of Tittgemeyer (4,913,048). The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, Tittgemeyer (4,913,048) discloses the placement of a conventional water conducting coat on the outer surface of a printing roller so as

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to achieve a fluid releasing function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903) depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Tittgemeyer (4,913,048). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

• Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of the secondary references, as applied to claim 1 above, further in view of Kuhn et al (5,468,568) and Morgan (5,093,180). The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Morgan (5,093,180) discloses the placement of a conventional engraved copper coat on the outer surface of a printing roller so as to achieve a printing function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Morgan (5,093,180). The motivation would have involved merely

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the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

- Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of the secondary references, as applied to claim 1 above, further in view of each of Kuhn et al (5,468,568) and Gerhardt (5,281,511). The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Gerhardt (5,281,511) discloses the placement of a conventional rubber coat on the outer surface of a printing roller so as to achieve a fluid transfer function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Gerhardt (5,281,511). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.
- Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of the secondary references, as applied to claim 1, further in view of each of Kuhn et al (5,468,568), Lewis (5,289,769) and Berna et al

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(5,347,927) The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Kuhn et al (5,468,568), Lewis (5,289,769) and Berna et al (5,347,927) discloses the placement of a conventional flexographic printing form on the outer surface of a printing roller so as to achieve a fluid transfer function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Kuhn et al (5,468,568), Lewis (5,289,769), and Berna et al (5,347,927). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

• Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view Johnson (1,690,684), Fantoni (4,964,338), Tittgemeyer (4,913,048) and in view of an acknowledgment of prior art under 35 USC 102(f) or (g). Applicants have acknowledged that the prior art (prior to his disclosed subject matter) teaches that printing sleeves for printing and transfer forms "...can be slipped by means of pressurized air over a printing cylinder core in the known manner and affixed thereto by shutting off the air supply..." (specification, page 1, Description of the Prior Art). This disclosure is available as prior art under

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35 USC 102(f) or (g) or on the admission per se. In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982).

Kobler et al (5,488,903) disclose a metal carrying sleeve for printing and transfer forms, comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam permanently connects together the facing edges of the sheet, and a homogeneous, continuous and outer circumferential surface is formed by processing the surface so that continuous printing is possible. Claim 8 has previously been amended to recite a "uniform" continuous outer surface. Applicants have contended that, as amended, the references do not disclose a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. In response to applicants' remarks, Fantoni (4,964,338) has been applied for the disclosure of a metal carrying sleeve for printing comprising a rectangular, thinwalled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. With respect to the amendment made to claim 8, Fantoni teaches a butt seam which connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer circumferential surface formed of an outer sleeve surface and the weld seam by processing the surface and the weld seam. Fantoni (4,964,338) clearly teaches that the formed butt seam for the printing plate produces a homogeneous, uniform continuous surface, i.e., "...a continuous

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surface of the printing plate along the butt joint..." (col.2); The seam "...ensures continuity on the external surface of the printing plate between those portions of the outer side of the deformed sheet 4 which flank the inlet..." (col. 3); the seam produces a "...smooth and continuous or external surface of the plate..." (col. 3), and establishes "...a smooth transition between those portions of said external surface which are adjacent said inlet..." (cl. 9). Johnson (1,690,684) discloses a metal carrying sleeve for dyeing (printing) comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer surface formed by processing the surface and the weld seam, i.e., Johnson (1,690,684) teaches that ".. The outer surface of the welding material, as at 13a, which protrudes beyond the surface of the sheet metal cylinder 12, is then preferably finished off in a known manner to the outer surface of the sheet metal, and if desired, the entire outer surface may be turned or machined to a true cylinder..." (page, col. 1). As broadly recited, the configuration of the welded seam before processing, as claimed, would have been obvious to one of ordinary skill in the art. This is especially so in view of the teaching of the same in Johnson (1,690,684) who discloses a conventional welded seam having an outwardly directed crown before processing the surface. The motivation would have involved merely the obvious utilization of conventional welding techniques. It would

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have been obvious to one having ordinary skill in the art at the time the invention was made to process the surface and the weld seam in Kobler et al (5,488,903) so as to achieve a homogeneous, continuous and uniform outer circumferential surface formed of an outer sleeve surface and the weld seam in a manner and for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). The motivation would have involved the desire to achieve a uniform continuous outer circumferential surface for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684).

With respect to Applicants' remarks, Johnson (1,690,684) teaches that the outer surface of the welding material, which protrudes beyond the surface of the sheet metal cylinder 12, is finished off in a known manner to the outer surface of the sheet metal, and that the entire outer surface may be turned or machined to a true cylinder.

Claim 8 was previously amended to recite that "...the cylindrical base plate is expandable by pressurized air so that it can be slid onto the printing cylinder..." It is noted that this recitation is set forth in purely functional terms. There is no positive method step that limits the claimed steps to that function. Accordingly, such functional recitation does not patentably define over the references as applied. However, Tittgemeyer (4,913,048) has been applied to teach that it is conventional to mount a carrying sleeve onto printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. Further, applicants have acknowledged (35 USC 102(f) or (g) or on the admission per se) in their specification that the prior art teaches

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that it is conventional to mount a carrying sleeve on a printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. It would have been obvious to one having ordinary skill in the art at the time the invention was made to broadly utilize any conventional cylinder mounting arrangement for the sleeve in Kobler et al if such were desired in place of the mounting system used therein. For example, it would have been obvious to slide the sleeve onto the cylinder via pressurized air in a manner as taught by Tittgemeyer (4,913,048) and as taught by the admission of prior art as noted above. Note that Kobler et al teach that the web 10 need not be connected with the weld seam. The suggestion and motivation for such a modification is found in the self-evident advantages thereof, such as the substitution of known alternatives of equivalent mounting arrangements so as to obtain the expected and desired results therefrom.

• Claims 9, 10 and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over Kobler et al (5,488,903) in view of the secondary references, as applied to claim 8 above, further in view of Dekumbis et al (5,147,999). Dekumbis et al (5,147,999) discloses conventional welding techniques comprising the use of welding filler materials, targeted gas feeds, and deposit welding. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the weld in Kobler et al (5,488,903) by using conventional welding

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techniques, as claimed, especially in view of the teaching of the same as disclosed by Dekumbis et al (5,147,999).

• Claims 12 and 13 are rejected under 35 U.S.C. § 103 as being unpatentable over Kobler et al (5,488,903) in view of Fantoni (4,964,338), Johnson (1,690,684), Fromson et al (4,183,788), Gerhardt (5,281,511), Tittgemeyer (4,913,048), and in view of an acknowledgment of prior art under 35 USC 102(f) or (g). Applicants have acknowledged that the prior art (prior to his disclosed subject matter) teaches that printing sleeves for printing and transfer forms "...can be slipped by means of pressurized air over a printing cylinder core in the known manner and affixed thereto by shutting off the air supply..." (Specification, page 1, Description of the Prior Art). This disclosure is available as prior art under 35 USC 102(f) or (g) or on the admission per se. In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982).

Kobler et al (5,488,903) discloses a metal carrying sleeve for printing and transfer forms, comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam permanently connects together the facing edges of the sheet, and a homogeneous, continuous and outer circumferential surface is formed by processing the surface so that continuous printing is possible. Claim 12 recites a continuous "uniform" outer surface.

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Applicants have contended that the references do not disclose a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. In response to applicants' amendment and remarks, Fantoni (4,964,338) is applied for the disclosure of a homogeneous, continuous and uniform outer circumferential surface formed of an outer sleeve surface and the weld seam by processing a sleeve surface and with a weld seam. In this regard, Fantoni (4,964,338) discloses a metal carrying sleeve for printing comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. With respect to the amendment made to claim 12, Fantoni teaches a butt seam which connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer circumferential surface formed of an outer sleeve surface and the weld seam by processing the surface and the weld seam. Fantoni (4,964,338) clearly teaches that the formed butt seam for the printing plate results in a homogeneous, continuous uniform outer surface, i.e., "...a continuous surface of the printing plate along the butt joint..." (col.2); the seam "...ensures continuity on the external surface of the printing plate between those portions of the outer side of the deformed sheet 4 which flank the inlet..." (col. 3); the seam produces a "...smooth and continuous or external surface of the plate..." (col. 3), and it establishes "...a smooth transition between those portions of said external surface which are adjacent said inlet..." (cl. 9). Johnson (1,690,684)

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discloses a metal carrying sleeve for dyeing (printing) comprising a rectangular, thinwalled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam connects together the facing edges of the sheet to form a homogeneous, continuous uniform outer circumferential surface formed by processing the surface and the weld seam. Johnson (1,690,684) teaches that "...The outer surface of the welding material, as at 13a, which protrudes beyond the surface of the sheet metal cylinder 12, is then preferably finished off in a known manner to the outer surface of the sheet metal, and if desired, the entire outer surface may be turned or machined to a true cylinder..." (page, col. 1). Accordingly, this would produce a homogeneous, continuous uniform outer surface. As broadly recited, the configuration of the welded seam before processing the cylinder surface, as claimed, would have been obvious to one of ordinary skill in the art. This is especially so in view of the teaching of the same in Johnson (1,690,684) who discloses a conventional welded seam having an outwardly directed crown before processing the outer sleeve surface. The motivation would have involved merely the obvious utilization of conventional welding techniques.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the surface and the weld seam in Kobler et al (5,488,903) so as to achieve a homogeneous, continuous and uniform outer circumferential surface formed of an outer sleeve surface and the weld seam in a

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manner and for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). The motivation would have involved the desire to achieve a uniform continuous outer circumferential surface for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684).

Applicants' remarks and claim amendments have been carefully considered and are answered by the application of the references as noted above. Johnson (1,690,684) does teach that the outer surface of the welding material, which protrudes beyond the surface of the sheet metal cylinder 12, is finished off in a known manner to the outer surface of the sheet metal, and that the entire outer surface may be turned or machined to a true cylinder. The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Fromson et al (4,183,788), Gerhardt (5,281,511) and Fantoni et al (4,964,338) discloses the conventional fabrication of a printing surface by the application of a photosensitive coat. Fromson et al (4,183,788) further teaches the conventional fabrication of a roughened and anodized surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903) depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Fromson et al (4,183,788), Gerhardt (5,281,511) and Fantoni et al (4,964,338). The motivation

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would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

Claim 12 was previously amended to recite that "...the cylindrical base plate is expandable by pressurized air so that it can be slid onto the printing cylinder..." It is noted that this recitation is set forth in purely functional terms. The claim does not recite any positive method step that limits the claimed steps to that function. Accordingly, such functional recitation does not patentably define over the references as applied. However, Tittgemeyer (4,913,048) has been applied to teach that it is conventional to mount a carrying sleeve onto printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. Further, applicants have acknowledged (35 USC 102(f) or (g) or on the admission per se) in their specification that the prior art teaches that it is conventional to mount a carrying sleeve on a printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. It would have been obvious to one having ordinary skill in the art at the time the invention was made to broadly utilize any conventional cylinder mounting arrangement for the sleeve in Kobler et al if such were desired in place of the mounting system used therein. For example, it would have been obvious to slide the sleeve onto the cylinder via pressurized air in a manner as taught by Tittgemeyer (4,913,048) and as taught by the admission of prior art as noted above. Note that Kobler et al teach that the web 10 need not be connected with the weld seam. The suggestion and motivation for such

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a modification is found in the self-evident advantages thereof, such as the substitution of known alternatives of equivalent mounting arrangements so as to obtain the expected and desired results therefrom.

• Claims 14 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of Fantoni (4,964,338), Kuhn et al (5,468,568), Morgan (5,093,180), Johnson (1,690,684), Tittgemeyer (4,913,048), and in view of an acknowledgment of prior art under 35 USC 102(f) or (g). Applicants have acknowledged that the prior art (prior to his disclosed subject matter) teaches that printing sleeves for printing and transfer forms "...can be slipped by means of pressurized air over a printing cylinder core in the known manner and affixed thereto by shutting off the air supply..." (Specification, page 1, Description of the Prior Art). This disclosure is available as prior art under 35 USC 102(f) or (g) or on the admission per se. In re Fout 675 F. 2d 297, 213 USPO 532 (CCPA 1982).

Kobler et al (5,488,903) discloses a metal carrying sleeve for printing and transfer forms, comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam permanently connects together the facing edges of the sheet, and a homogeneous, continuous outer circumferential surface is formed by processing the surface so that continuous printing is possible. Claim 14 was previously amended to recite a continuous "uniform" outer surface. Applicants have previously contended

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that, as amended, the references do not disclose a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam.

With respect to the amendment made to claim 14, Fantoni teaches a butt seam which connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer circumferential surface formed of an outer sleeve surface and the weld seam by processing the surface and the weld seam. Fantoni (4,964,338) is applied for the disclosure of a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. In this regard, Fantoni (4,964,338) discloses a metal carrying sleeve for printing comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A butt seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed of an outer sleeve surface and weld seam formed by processing the surface and the weld seam. Fantoni (4,964,338) clearly teaches that the formed butt seam for the printing plate produces a continuous uniform outer surface, i.e., "...a continuous surface of the printing plate along the butt joint..." (col.2); the seam "...ensures continuity on the external surface of the printing plate between those portions of the outer side of the deformed sheet 4 which flank the inlet..." (col. 3); the seam produces a "...smooth and continuous or external

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surface of the plate..." (col. 3), and establishes "...a smooth transition between those portions of said external surface which are adjacent said inlet..." (cl. 9). Johnson (1,690,684) discloses a metal carrying sleeve for dyeing (printing) comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Johnson (1,690,684) teaches that ".. The outer surface of the welding material, as at 13a, which protrudes beyond the surface of the sheet metal cylinder 12, is then preferably finished off in a known manner to the outer surface of the sheet metal, and if desired, the entire outer surface may be turned or machined to a true cylinder..." (page, col. 1). Accordingly, Johnson (1,690,684) teaches the processing of the sleeve surface so as to obtain a continuous uniform outer surface. As broadly recited, the configuration of the welded seam before processing the surface, as claimed, would have been obvious to one of ordinary skill in the art. This is especially so in view of the teaching of the same in Johnson (1,690,684) who discloses a conventional welded seam having an outwardly directed crown before processing the surface. The motivation would have involved merely the obvious utilization of conventional welding techniques.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the surface and the weld seam in Kobler et al (5,488,903) so as to achieve a homogeneous, continuous and uniform outer circumferential surface formed of an outer sleeve surface and the weld seam in a manner and for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). The motivation would have involved the desire to achieve a uniform continuous outer circumferential surface for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684).

Applicants' remarks and claim amendments have been carefully considered and are answered by the application of the references as noted above. Johnson (1,690,684) does teach that the outer surface of the welding material, which protrudes beyond the surface of the sheet metal cylinder 12, is finished off in a known manner to the outer surface of the sheet metal, and that the entire outer surface may be turned or machined to a true cylinder. The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, Kuhn et al (5,468,568) and Morgan (5,093,180) disclose the placement of a conventional engraved copper coat on the outer surface of a printing roller so as to achieve a gravure printing function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the fluid

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transfer function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Kuhn et al (5,468,568) and Morgan (5,093,180). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

Claim 14 was previously amended to recite that "...the cylindrical base plate is expandable by pressurized air so that it can be slid onto the printing cylinder..." It is noted that this recitation is set forth in purely functional terms. The claim does not recite any positive method step that limits the claimed steps to that function. Accordingly, such functional recitation does not patentably define over the references. as applied. However, Tittgemeyer (4,913,048) has been applied to teach that it is conventional to mount a carrying sleeve onto printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. Further, applicants have acknowledged (35 USC 102(f) or (g) or on the admission per se) in their specification that the prior art teaches that it is conventional to mount a carrying sleeve on a printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. It would have been obvious to one having ordinary skill in the art at the time the invention was made to broadly utilize any conventional cylinder mounting arrangement for the sleeve in Kobler et al if such were desired in place of the mounting system used therein. For example, it would have been obvious to slide the sleeve onto the cylinder via

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pressurized air in a manner as taught by Tittgemeyer (4,913,048) and as taught by the admission of prior art as noted above. Note that Kobler et al teach that the web 10 need not be connected with the weld seam. The suggestion and motivation for such a modification is found in the self-evident advantages thereof, such as the substitution of known alternatives of equivalent mounting arrangements so as to obtain the expected and desired results therefrom.

• Claim 16 is rejected under 35 U.S.C. § 103 as being unpatentable over Kobler et al (5,488,903) in view of Johnson (1,690,684), Fantoni (4,964,338) and each of Kuhn et al (5,468,568), Tittgemeyer (4,913,048), Gerhardt (5,281,511), and in view of an acknowledgment of prior art under 35 USC 102(f) or (g). Applicants have acknowledged that the prior art (prior to his disclosed subject matter) teaches that printing sleeves for printing and transfer forms "...can be slipped by means of pressurized air over a printing cylinder core in the known manner and affixed thereto by shutting off the air supply..." (Specification, page 1, Description of the Prior Art). This disclosure is available as prior art under 35 USC 102(f) or (g) or on the admission per se. In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982).

Kobler et al (5,488,903) disclose a metal carrying sleeve for printing and transfer forms, comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another.

A weld seam permanently connects together the facing edges of the sheet, and a

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homogeneous, continuous and outer circumferential surface is formed by processing the surface so that continuous printing is possible. Claim 16 has been amended to recite a continuous "uniform" outer surface. Applicants have previously contended that the references do not disclose a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam.

With respect to the amendment made to claim 16, Fantoni teaches a butt seam which connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer circumferential surface formed of an outer sleeve surface and the weld seam by processing the surface and the weld seam. Fantoni (4,964,338) is applied for the disclosure of a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. In this regard, Fantoni (4,964,338) discloses a metal carrying sleeve for printing comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A butt seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Fantoni (4,964,338) clearly teaches that the formed butt seam for the printing plate produces a uniform continuous outer surface, i.e., "...a continuous surface of the printing plate along the butt joint..." (col.2); the seam "...ensures continuity on the external surface of the printing plate between those portions of the outer side of the

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deformed sheet 4 which flank the inlet..." (col. 3); the seam produces a "...smooth and continuous or external surface of the plate..." (col. 3), and establishes "...a smooth transition between those portions of said external surface which are adjacent said inlet..." (cl. 9). Johnson (1,690,684) further discloses a metal carrying sleeve for dyeing (printing) comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Johnson (1,690,684) teaches that "...The outer surface of the welding material, as at 13a, which protrudes beyond the surface of the sheet metal cylinder 12, is then preferably finished off in a known manner to the outer surface of the sheet metal, and if desired, the entire outer surface may be turned or machined to a true cylinder..." (page, col. 1). Accordingly, Johnson (1,690,684) also teaches a step of processing the surface so as to obtain a continuous uniform outer surface. As broadly recited, the configuration of the welded seam before processing the surface, as claimed, would have been obvious to one of ordinary skill in the art. This is especially so in view of the teaching of the same in Johnson (1,690,684) who teaches that the welded seam has an outwardly directed crown prior to processing the surface. The motivation would have involved merely the obvious utilization of conventional welding techniques.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the surface and the weld seam in Kobler et al (5,488,903) so as to achieve a homogeneous, continuous uniform outer circumferential surface formed of an outer sleeve surface and the weld seam in a manner and for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). The motivation would have involved the desire to achieve a continuous and uniform outer circumferential surface for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684) as exemplified above. Applicants' remarks and claim amendments have been carefully considered and are answered by the application of the references as noted above. Johnson (1,690,684) does teach that the outer surface of the welding material, which protrudes beyond the surface of the sheet metal cylinder 12, is finished off in a known manner to the outer surface of the sheet metal, and that the entire outer surface may be turned or machined to a true cylinder. The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Gerhardt (5,281,511) discloses the placement of a conventional rubber coat on the outer surface of a printing roller so as to achieve a fluid transfer function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the function

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desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by each of Kuhn et al (5,468,568), Tittgemeyer (4,913,048) and Gerhardt (5,281,511). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

Claim 16 has been amended has been amended to recite that "...the cylindrical base plate is expandable by pressurized air so that it can be slid onto the printing cylinder..." It is noted that this recitation is set forth in purely functional terms. The claim does not recite any positive method step that limits the claimed steps to that function. Accordingly, such functional recitation does not patentably define over the references as applied. However, Tittgemeyer (4,913,048) has been applied to teach that it is conventional to mount a carrying sleeve onto printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. Further, applicants have acknowledged (35 USC 102(f) or (g) or on the admission per se) in their specification that the prior art teaches that it is conventional to mount a carrying sleeve on a printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. It would have been obvious to one having ordinary skill in the art at the time the invention was made to broadly utilize any conventional cylinder mounting arrangement for the sleeve in Kobler et al if such were desired in place of the mounting system used therein. For example, it would have been obvious to slide the

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sleeve onto the cylinder via pressurized air in a manner as taught by Tittgemeyer (4,913,048) and as taught by the admission of prior art as noted above. Note that Kobler et al teach that the web 10 need not be connected with the weld seam. The suggestion and motivation for such a modification is found in the self-evident advantages thereof, such as the substitution of known alternatives of equivalent mounting arrangements so as to obtain the expected and desired results therefrom.

• Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kobler et al (5,488,903) in view of Johnson (1,690,684), Fantoni (4,964,338), Fadner et al (5,207,158), Morgan (5,093,180), Jenkins (4,963,404), Tittgemeyer (4,913,048) and in view of an acknowledgment of prior art under 35 USC 102(f) or (g). Applicants have acknowledged that the prior art (prior to his disclosed subject matter) teaches that printing sleeves for printing and transfer forms "...can be slipped by means of pressurized air over a printing cylinder core in the known manner and affixed thereto by shutting off the air supply..." (Specification, page 1, Description of the Prior Art). This disclosure is available as prior art under 35 USC 102(f) or (g) or on the admission per se. In re Fout 675 F. 2d 297, 213 USPO 532 (CCPA 1982).

Kobler et al (5,488,903) disclose a metal carrying sleeve for printing and transfer forms, comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another.

A weld seam permanently connects together the facing edges of the sheet, and a

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homogeneous, continuous and outer circumferential surface is formed by processing the surface so that continuous printing is possible. Claim 17 was previously amended to recite a continuous "uniform" outer surface. Applicants contend that, as amended, the references do not disclose a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Fantoni (4,964,338) is applied for the disclosure of a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. With respect to the amendment made to claim 17, Fantoni teaches a butt seam which connects together the facing edges of the sheet to form a homogeneous, uniform continuous outer circumferential surface formed of an outer sleeve surface and the weld seam by processing the surface and the weld seam. In this regard, Fantoni (4,964,338) discloses a metal carrying sleeve for printing comprising a rectangular. thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A butt seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Fantoni (4,964,338) clearly teaches that the formed butt seam for the printing plate produces a continuous uniform surface, i.e., "...a continuous surface of the printing plate along the butt joint..." (col.2); the seam "...ensures continuity on the external surface of the printing plate between those portions of the outer side of the deformed

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sheet 4 which flank the inlet..." (col. 3); the seam produces a "...smooth and continuous or external surface of the plate..." (col. 3), and establishes "...a smooth transition between those portions of said external surface which are adjacent said inlet..." (cl. 9). Johnson (1,690,684) further discloses a metal carrying sleeve for dyeing (printing) comprising a rectangular, thin-walled flat metal sheet that is bent to a desired hollow cylindrical form so that two edges of the flat sheet face one another. A weld seam connects together the facing edges of the sheet to form a homogeneous, continuous and uniform outer circumferential surface formed by processing the surface and the weld seam. Johnson (1,690,684) teaches that ".. The outer surface of the welding material, as at 13a, which protrudes beyond the surface of the sheet metal cylinder 12, is then preferably finished off in a known manner to the outer surface of the sheet metal, and if desired, the entire outer surface may be turned or machined to a true cylinder..." (page, col. 1). Thus Johnson (1,690,684) also teaches processing the surface so as to obtain a continuous uniform outer surface. As broadly recited, the configuration of the welded seam, as claimed, would have been obvious to one of ordinary skill in the art. This is especially so in view of the teaching of the same in Johnson (1,690,684) who discloses a conventional welded seam having an outwardly directed crown. The motivation would have involved merely the obvious utilization of conventional welding techniques. It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the sleeve

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surface and the weld seam in Kobler et al (5,488,903) so as to achieve a homogeneous, continuous uniform outer circumferential surface formed of an outer sleeve surface and the weld seam in a manner and for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). The motivation would have involved the desire to achieve a continuous and uniform outer circumferential surface for the reasons as taught by each of Fantoni (4,964,338) and Johnson (1,690,684). Applicants' remarks and claim amendments have been carefully considered and are answered by the application of the references as noted above. Johnson (1,690,684) does teach that the outer surface of the welding material, which protrudes beyond the surface of the sheet metal cylinder 12, is finished off in a known manner to the outer surface of the sheet metal, and that the entire outer surface may be turned or machined to a true cylinder. The particular working surface placed on the carrying sleeve would necessarily depend on the expected function desired to be obtained. For example, each of Fadner et al (5,207,158), Morgan (5,093,180) and Jenkins (4,963,404) discloses the placement of a conventional ceramic coat on the outer surface of a printing roller so as to achieve a fluid transfer function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any conventional working surface on the roller of Kobler et al (5,488,903), depending on the function desired. For example, it would have been obvious to utilize a roller surface in Kobler et al (5,488,903) for the reasons and as taught by Fadner et al (5,207,158) Morgan

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(5,093,180) and Jenkins (4,963,404). The motivation would have involved merely the obvious selection of conventional roller surfaces so as to obtain the expected and desired results therefrom.

Claim 17 was previously amended to recite that "...the cylindrical base plate is expandable by pressurized air so that it can be slid onto the printing cylinder...." It is noted that this recitation is set forth in purely functional terms. The claim does not recite any positive method step that limits the claimed steps to that function. Accordingly, such functional recitation does not patentably define over the references as applied. However, Tittgemeyer (4,913,048) has been applied to teach that it is conventional to mount a carrying sleeve onto printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. Further, applicants have acknowledged (35 USC 102(f) or (g) or on the admission per se) in their specification that the prior art teaches that it is conventional to mount a carrying sleeve on a printing cylinder by sliding the sleeve onto the printing cylinder via pressurized air. It would have been obvious to one having ordinary skill in the art at the time the invention was made to broadly utilize any conventional cylinder mounting arrangement for the sleeve in Kobler et al if such were desired in place of the mounting system used therein. For example, it would have been obvious to slide the sleeve onto the cylinder via pressurized air in a manner as taught by Tittgemeyer (4,913,048) and as taught by the admission of prior art as noted above. Note that Kobler et al teach that the web 10

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need not be connected with the weld seam. The suggestion and motivation for such a modification is found in the self-evident advantages thereof, such as the substitution of known alternatives of equivalent mounting arrangements so as to obtain the expected and desired results therefrom.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

PRIMARY EXAMINER
ART UNIT 2854

April 21, 1999

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